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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,566	09/22/2003	Jennifer M. Kurtz	C-3045	1655

7590 02/08/2006  
William W. Jones  
6 Juniper Lane  
Madison, CT 06443

EXAMINER

PARSONS, THOMAS H

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/666,566	<b>Applicant(s)</b> KURTZ ET AL.	
	<b>Examiner</b> Thomas H. Parsons	<b>Art Unit</b> 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-18 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

***Response to Amendment***

This is in response to the Amendment filed 19 January 2006.

**(Previous) DETAILED ACTION**

***Specification***

1. The objection to the abstract has been **withdrawn** in view of Applicant's Amendment.
2. The objection to the disclosure because of minor informalities has been **withdrawn** in view of Applicant's Amendment.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 263 052.

**Claim 1:** EP 0 263 052 in Figure 2 discloses a unitary manifold assembly for use in controlling the flow of reactant gas streams between a plurality of fuel cell stacks in a fuel cell power plant, comprising a fuel gas passage (102) having a plurality of fuel gas inlets (106, 104) for selective connection to a plurality of fuel cell stacks in a first stage of power plant fuel cell stacks (1 and 2), said fuel gas passage being operative to receive partially expended fuel gas streams exhausted from the plurality of fuel cell stacks (via 110, 112) and to combine the partially expended fuel gas streams into a combined fuel gas stream (108), and the fuel gas

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passage having a fuel gas outlet (108) for directing the combined fuel gas stream to at least one second stage power plant fuel cell stack (3) whereby the combined fuel gas stream is used to provide fuel for the second stage power plant fuel cell stack, the first (1, 2) and second (3) fuel cell stack stages forming at least a part of a power section of the power plant (col. 4: 13-col. 5: 3).

The Examiner has construed the “**unitary manifold assembly**” as the inlet and outlet manifolds and associated piping assembled together into a single unit making up the fuel distribution system depicted in Figure 2.

***Allowable Subject Matter***

5. Claims 9-18 are allowable over the prior art of record.
6. Claims 2-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Reasons for Indicating Allowable Subject Matter***

7. The following is a statement of reasons for the indication of allowable subject matter:

The claimed invention is directed towards a unitary manifold assembly comprising a single fuel gas passage connected to a plurality of fuel cell stacks in one stage of fuel cell stacks, fuel gas passage being operative to receive partially expended fuel gas streams exhausted from the plurality of fuel cell stacks and to combine partially expended fuel gas streams into a

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combined fuel gas stream, and the fuel gas passage also being connected to the at least one fuel cell stack in the subsequent stage for directing the combined fuel gas stream to the least one fuel cell stack in the subsequent stage.

In contrast, EP 0 263 052 discloses a manifold assembly comprising inlet and outlet manifolds and associated piping (conduits) (i.e. a plurality of fuel gas passages) connected to a plurality of fuel cell stacks for providing a first amount of fuel to a first stage of fuel cells and for delivering a combined fuel exhaust from the first stage to a second stage of fuel cells. EP 0 263 052 does not teach or suggest a single fuel gas passage connected to a plurality of fuel cell stacks in one stage of fuel cell stacks and also connected to the at least one fuel cell stack in the subsequent stage.

**Accordingly, claim 9 and claims 10-16, which are dependent thereon, are patentably distinct from the prior art of record.**

The claimed invention is also directed toward a method for providing a fuel gas reactant and an air reactant to a multistage fuel cell power plant power section which power section includes a first fuel cell stack stage having a plurality of fuel cell stack assemblies, and a subsequent fuel cell stack stage having at least one fuel cell stack assembly, the method comprising the steps of: a) providing a one piece reactant transfer manifold assembly which is connected to each of the fuel cell stacks in the power plant power section; b) directing streams of a fuel gas into each of the fuel cell stack assemblies in the first fuel cell stack stage; and c) combining partially spent fuel gas streams from each of the fuel cell stack assemblies in the first fuel cell stack stage into a single fuel gas stream in the transfer manifold, and directing the combined single fuel gas stream through a single fuel gas passage in the transfer manifold to the

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at least one fuel cell stack assembly in the subsequent fuel cell stack stage so as to provide a fuel gas stream for the subsequent fuel cell stack stage.

EP 0 263 052 discloses a method for providing a fuel gas reactant and an air reactant to a multistage fuel cell power plant power section which power section includes a first fuel cell stack stage having a plurality of fuel cell stack assemblies, and a subsequent fuel cell stack stage having at least one fuel cell stack assembly, the method comprising the steps of providing inlet and outlet manifolds and associated piping (conduits) connected to a plurality of fuel cell stacks for providing a first amount of fuel to a first stage of fuel cells and for delivering a combined fuel exhaust from the first stage to a second stage of fuel cells. EP 0 263 052 does not teach or disclose a one piece reactant transfer manifold assembly.

**Accordingly, claim 17 and claim 18, which is dependent thereon, are patentably distinct from the prior art of record.**

### ***Response to Arguments***

8. Applicant's arguments filed 19 January 2006 have been fully considered but they are not persuasive.

The Examiner has construed the “**unitary manifold assembly**” as comprising a fuel gas passage (102) having a plurality of branch inlets (104, 106) and outlets conduits 110, 112, 108) and associated piping assembled together (collectively) into a single unit making up the fuel distribution system depicted in Figure 2. The claim has been broadly interpreted as a single fuel distribution system comprising a main fuel gas passage having a plurality of inlet and outlet

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branches that collectively distributes fuel and exhaust between a first stage (stack 1 and 2) and a second stage (stack 3).

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas H. Parsons whose telephone number is (571) 272-1290. The examiner can normally be reached on M-F (7:00-4:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas H Parsons  
Examiner  
Art Unit 1745

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**PATRICK JOSEPH RYAN**  
**SUPERVISORY PATENT EXAMINER**